BITSAT Crash Course 2025 Lecture Planner - Physics

S.No.	Batch Name	Subject	Sub- Subject	Chapter Name	Topic	No. of Lecture	Date	Faculty Name
1	BITSAT Crash Course 2025	Physics	Physics	Motion in one Dimension	Introduction Concept of position, path length (distance), displacement Speed Velocity Acceleration Graphs Motion with constant acceleration (uniformly acceleration motion) Motion with variable acceleration Relative motion in one dimension only	1	Monday, February 24, 2025	Vinaykant Bhalla Sir
2	BITSAT Crash Course 2025	Physics	Physics	Motion in Plane	General Motion in 2D, Projectile Motion Projectile Motion Equation of Trajectory, Practice Questions on Projectile Motion Projectile Motion on Incline Relative Motion, Relative Motion in 1D Relative Motion in 2D, Relative Motion between Projectiles, Condition of Collision Minimum Distance Between Projectiles River Problem, Rain Problems Practice Questions on Relative Motion	1	Wednesday, February 26, 2025	Vinaykant Bhalla Sir
3	BITSAT Crash Course 2025	Physics	Physics	Newton's Laws of Motion	Force, Types of Forces Newton's Laws Free Body Diagram, Questions on Equilibrium Questions on Newton's Second Law, Pulley Problems Basic Constraint, Pulley Problems Spring, Combination of Spring, Cutting of Spring & String Constraint Relations - String Constraint, Rigid Body Constraint, Pulley Constraint Practice Questions on Constraint Friction, Types of Friction Angle of Repose, Questions on Friction,Practice Questions,Two Block System	1	Thursday, February 27, 2025	Vinaykant Bhalla Sir
4	BITSAT Crash Course 2025	Physics	Physics	Circular Motion	Circular Motion	1	Saturday, March 1, 2025	Vinaykant Bhalla Sir
5	BITSAT Crash Course 2025	Physics	Physics	Work and Energy	Work, Work done by Different Forces Work Done by Different Forces, Practice Questions Work Energy Theorem, Questions on Work Energy Theorem Kinetic Energy, Relation between Kinetic Energy and Momentum, Conservative and Non-Conservative Forces Potential Energy, Relation Between Work and Potential Energy Conservation of Mechanical Energy, Practice Questions Vertical Circular Motion Power	1	Monday, March 3, 2025	Vinaykant Bhalla Sir
6	BITSAT Crash Course 2025	Physics	Physics	Center of Mass	Concept of Center of Mass, COM of Discrete Mass System, COM of Continuous Bodies Practice Questions on COM Conservation of Momentum, Motion of COM, Practice Questions Impulse, Collision, 1D Collision Questions on 1D Collision 2D Collision, Oblique Collision, Impulsive and Non-Impulsive Forces	1	Tuesday, March 4, 2025	Vinaykant Bhalla Sir
7	BITSAT Crash Course 2025	Physics	Physics	Rotational Motion	Moment of Inertia, Moment of Inertia of Discrete and Continuous Mass System Practice Questions on MOI Parallel Axis and Perpendicular Axis Theorem, Practice Questions Torque, Point of Application of Force, Torque of Force about a Point and Axis Equilibrium of a Rigid Body, Toppling, Practice Questions on Equilibrium Rotation of Rigid Body About Fixed Axis	1	Wednesday, March 5, 2025	Vinaykant Bhalla Sir
8	BITSAT Crash Course 2025	Physics	Physics	Rotational Motion	Instantaneous Axis of Rotation, Rotation+Translation Practice Questions Kinetic Energy of Rotating Body, Work Done by Torque, Work Energy Theorem Practice Questions on Work Energy Theorem in Rotation Rolling Motion, Rolling on Incline,Practice Questions on Rolling Collision, Practice Questions	2	Thursday, March 6, 2025	Vinaykant Bhalla Sir
9	BITSAT Crash Course 2025	Physics	Physics	Gravitation + Mechanical Properties of Solids	Newton's Law of Gravitation, Gravitational Field & Potential due to Discrete and Continuous Bodies Gravitational Field and Potential due to Continuous Bodies Acceleration due to Gravity of Earth, Variation in Acceleration due to Gravity Practice Questions on Acceleration due to Gravity Escape Velocity, Orbital Velocity Introduction Stress And Strain Hooke's Law Stress-Strain Curve Types Of Elasticity Coefficients (Elastic Moduli)	1	Saturday, March 8, 2025	Vinaykant Bhalla Sir
10	BITSAT Crash Course 2025	Physics	Physics	Mechanical Properties of fluids	Pressure Inside Liquid, Variation of Pressure in Liquid Questions on Pressure in Liquid, Pressure Inside Accelerating Liquid Pascal's Law, Archimedes' Principle Questions on Archimedes' Principle Streamline Flow, Bernoulli's Theorem Questions on Bernoulli's Theorem, Velocity of Efflux, Viscosity Questions on Viscosity, Stoke's Law, Surface Tension Questions on Viscosity, Stoke's Law, Surface Tension Surface Tension, Practice Questions	1	Monday, March 10, 2025	Vinaykant Bhalla Sir
11	BITSAT Crash Course 2025	Physics	Physics	Thermal properties of matter	Thermometry Calorimetry Thermal Expansion Heat Transfer - Conduction	1	Tuesday, March 11, 2025	Vinaykant Bhalla Sir
12	BITSAT Crash Course 2025	Physics	Physics	Kinetic Theory of Gases & Thermodynamics	Ideal Gas and Assumptions, Velocity Distribution of Gas Molecules, Pressure Exerted by Gas Kinetic Energy of Gas, Gas Laws, Degree of Freedom Internal Energy of Gas, Work Done by Gas, First Law of Thermodynamics Different Thermodynamic Processes, Molar Heat Capacity Practice Questions Carnot's Engine, Mean Free Path of Gas Molecules	1	Wednesday, March 12, 2025	Vinaykant Bhalla Sir
13	BITSAT Crash Course 2025	Physics	Physics	Oscillations	Oscillations	1	Thursday, March 13, 2025	Vinaykant Bhalla Sir
14	BITSAT Crash Course 2025	Physics	Physics	Waves	Types of Wave, Travelling Wave, Equation of Wave Wave Speed, Relation Between Phase Difference and Path Difference Energy Transferred by Wave, Reflection and Refraction of Wave Sound Wave, Properties of Sound Wave Wave Interference, Standing Wave Questions on Standing Wave, Resonance,	1	Saturday, March 15, 2025	Vinaykant Bhalla Sir
15	BITSAT Crash Course 2025	Physics	Physics	Ray Optics and Optical Instruments	Plane mirrors Reflection From a Curved Surface	1	Monday, March 17, 2025	Vinaykant Bhalla Sir
16	BITSAT Crash Course 2025	Physics	Physics	Ray Optics and Optical Instruments	Refraction of Light Prism TIR	2	Tuesday, March 18, 2025	Vinaykant Bhalla Sir
17	BITSAT Crash Course 2025	Physics	Physics	Wave Optics	Huygens' Wave Theory Interference of light YDSE & Fringe Visibility Bichromatic light interference and Optical Path Length Fresnel Biprism and Thin film interference Diffraction and Power of Resolution	1	Wednesday, March 19, 2025	Vinaykant Bhalla Sir
18	BITSAT Crash Course 2025	Physics	Physics	Dual Nature of Radiation and Matter	Dual nature of matter and waves Photoelectric effect Photoelectric effect Quantum Theory of Light	1	Thursday, March 20, 2025	Vinaykant Bhalla Sir
19	BITSAT Crash Course 2025	Physics	Physics	Atoms	Atomic Models Bohr's Model Atomic Spectrum Hydrogen Spectra & Atomic collision X-Rays	1	Saturday, March 22, 2025	Vinaykant Bhalla Sir
20	BITSAT Crash Course 2025	Physics	Physics	Nuclei	Introduction to Nucleus Radioactive Decay Radioactivity Parallel and Series Decay	1	Monday, March 24, 2025	Vinaykant Bhalla Sir
21	BITSAT Crash Course 2025	Physics	Physics	Semiconductor Electronics: Materials, Devices and Simple Circuits	Introduction to Semiconductors Intrinsic and Extrinsic Semiconductor PN Junction Diode Application of P-N Junction Diode	1	Tuesday, March 25, 2025	Vinaykant Bhalla Sir

22	BITSAT Crash Course 2025	Physics	Physics	Electric Charges and Fields	Introduction Charge Coulomb's Law Electric Field Conductors and Insulators Electric Field of a Continuous Charge Distribution Motion of a Charged Particle in Uniform Electric Field Electric Field Lines Electric Flux Gauss Law Application of gauss's law Electric Dipole Dipole in a Uniform External Field	1	Wednesday, March 26, 2025	Vinaykant Bhalla Sir
23	BITSAT Crash Course 2025	Physics	Physics	Electrostatic Potential and Capacitance	Electrostatic Potential/Potential difference Relation between Electric field (E) & Electric potential (V) Equipotential Surface Electrostatic potential energy	1	Thursday, March 27, 2025	Vinaykant Bhalla Sir
24	BITSAT Crash Course 2025	Physics	Physics	Electrostatic Potential and Capacitance	Electric potential due to dipole Electrostatics of Conductor Conductor & its capacitance Charging of a capacitor Combination of capacitors	2	Saturday, March 29, 2025	Vinaykant Bhalla Sir
25	BITSAT Crash Course 2025	Physics	Physics	Current Electricity	Electric Current Electric Current Current in Conductors	1	Wednesday, April 9, 2025	Vinaykant Bhalla Sir
26	BITSAT Crash Course 2025	Physics	Physics	Current Electricity	Kirchhoff's Laws and Combination of Resistances Wheatstone Bridge and Symmetric Circuits Heating Effect of Current Cells and Combination of Cells	2	Thursday, April 10, 2025	Vinaykant Bhalla Sir
27	BITSAT Crash Course 2025	Physics	Physics	Magnetic Effect of Current Chapter	Oersted's Experiment and Biot-Savart's Law B-field due to a current carrying Ring and Problems on combination of Ring and Rod Ampere's Law and Its applications Force on a moving charge in a Magnetic Field Lorentz force Motion of a charge particle in presence of both Electric and magnetic field Magnetic force on a Current Carrying Conductor	1	Saturday, April 12, 2025	Vinaykant Bhalla Sir
28	BITSAT Crash Course 2025	Physics	Physics	Electromagnetic Induction	Magnetic Flux and Lenz's Law Faraday's Law Calculation of Induced EMF Self Inductance	1	Monday, April 14, 2025	Vinaykant Bhalla Sir
29	BITSAT Crash Course 2025	Physics	Physics	Alternating Current	Introduction to Alternating Current, Average and RMS Values Types of AC Circuits, Power & Power Factor Choke Coil,Series LCR Circuit and Resonant Frequency	1	Tuesday, April 15, 2025	Vinaykant Bhalla Sir
30	BITSAT Crash Course 2025	Physics	Physics	Electromagnetic Waves	Characteristics of Electromagnetic Waves	1	Wednesday, April 16, 2025	Vinaykant Bhalla Sir
31	BITSAT Crash Course 2025	Physics	Physics	Units & Measurement	Introduction to physics and physical quantities, fundamental/derived System of units, Dimensions Principle of Homogenity & Dimensional Analysis Application of Dimensional analysis Limitations of the Dimensional Analysis	1	Thursday, April 17, 2025	Vinaykant Bhalla Sir